

REMARKS

1. **Office Action's Comment 1:** The Office Action's Comment 1 states an objection to the drawings under 37 CFR 1.83(a) "because they fail to show the "reeling portion 522" disclosed on Page 6, line 12 as described in the specification." The "reeling portion 522" which is actually first referred to on Page 6, line 14, is clearly marked on Fig. 5. If one looks at Fig. 5, one will see that the number "522" is marked on the right and central of the figure (to the right of the number 526). Since the reeling portion 522 is shown in Fig. 5, no amendments to the drawings have been made.
2. **Office Action's Comments 2 – 4:** The Office Action rejects Claims 1-8 and 23-30 under 35 USC 102(b) as being anticipated by Street (4,625,962; hereinafter "Street").
 - 2.1. Comment 2 states that "as to claims 1-5, Street discloses a dual-function treading exerciser comprising a lower body exerciser having a treading platform and a continuous tread (20), and an upper body exerciser (C) having a frame (30) and a movable handle assembly, joined to a front portion of the frame, that includes a pair of pulling devices (80,82) and a rotary shaft (42) wherein the pulling devices each include a pulley (84), a pull cord (70), a handgrip (74), and a biasing unit (92) as substantially claimed (see Figs. 1&2).
 - 2.1.1. Remarks. Applicant has amended Claim 1 to include the further limitations to the movable handle assembly of original Claim 9, including a magnetic resistance device. As stated in the Office Action, Street does not disclose a resistance device that is magnetic (see Office Action p. 5, L 5; reproduced at 3.2 below). Amended Claim 1 further includes the limitation of "a flywheel assembly mounted on said rotary shaft, said flywheel assembly including a flywheel, and a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel." This further limitation bolsters the claim's novelty as well as makes it non-obvious over the prior art as discussed below.
 - 2.1.2. Conclusion. For these and the reasons provided below at 3.2.1, Applicant believes that amended Claim 1 is in condition for allowance as being novel and non-obvious

over the prior art and, as such, so are Claims 2-5 which depend from same, i.e., an allowable base claim.

2.2. Comment 3 states that “as to claims 6-8, Street discloses an exercise device as described above . . . Street further discloses that the movable handle assembly is disposed substantially higher than the fixed handles (14) and the biasing unit includes a spiral spring member (92) that is fastened to a housing (94) at one end and to a respective pulley (84) at the other end and biased to rotate in a predetermined direction (see Fig. 1).”

2.2.1. Remarks. For the reasons enumerated above at 2.1.1, amended Claim 1 is now in condition for allowance and as such, so are Claims 6-8 which depend from same, i.e., an allowable base claim.

2.3. Comment 4 states that “as to 23-30, Street discloses an exercise device as substantially claimed (see discussion of claims 1-8). Street further discloses that the pulling devices operate independently of one another via the one-way clutch (86) (see Abstract and Fig. 2).”

2.3.1. Remarks. Applicant has amended Claim 23 to include the further limitations including the limitation of “a flywheel assembly mounted on said rotary shaft, said flywheel assembly including a flywheel, and a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel.” Street does not disclose a flywheel disposed between two magnetically conductive rings. (see Street Figs. 1, 2, 4-6, flywheel 40). For this and the reasons provided below at 3.2.1, Applicant believes that amended Claim 23 is in condition for allowance as being novel and non-obvious over the prior art and, as such, so too are Claims 24-30 which depend from same, i.e., an allowable base claim.

3. **Office Action's Comments 5 – 6:** The Office Action rejects Claims 12-19 under 35 USC 103(a) as being unpatentable over Street in view of Lee et al. (6,123,649; hereinafter “Lee”) and rejects Claims 9, 20 and 31 as being unpatentable over Street in view of Wang et al. (6,599,223, hereinafter “Wang”).

3.1. Comment 5 states that “as to claims 12-19, Street discloses an exercise device as substantially claimed (see discussion of claims 1-8). Street does not disclose that the

pulling device includes a chamber wherein the pulley is disposed. Lee et al. disclose a similar exercise device having a pair of pulleys (140) that are disposed within a chamber (130)(see Figs. 6-10). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to place each of Street's pulleys into a chamber/housing since the practice of placing movable parts into a protective housing is well known in the art to protect the components from dirt and dust and the user from the movable parts.

3.1.1. Remarks - the inclusion in currently amended Claim 12, of a flywheel disposed between two magnetically conductive rings is novel and non-obvious. The cited Wang reference discloses a "magnetic control resistance mechanism 20. . include[ing] a flywheel 21. . ." and the flywheel includes "a magnet set 28 which is kept away from the flywheel 21. . ." (see Wang Fig. 3, col. 2, L 2-3, 25-28, 45-46). No magnetically conductive rings are associated with the flywheel 21 of Wang. However, the present invention discloses, by contrast, a flywheel 75 which includes two magnetically conductive rings 73 disposed respectively and on opposite sides of the flywheel 75 (see Figs. 3-4, p. 8, L9), making the present invention novel with respect to this feature over the flywheel 21 of Wang which has associated with it no magnetically conductive rings whatsoever. This feature is also non-obvious over Wang as discussed below at 3.2.1.2.

3.1.2. Conclusion. Independent Claim 12 is amended to include the limitation of "a flywheel assembly including a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel," (a limitation originally included in Claims 10, 21, and 32) among other additional limitations, making base Claim 12, and all claims depending from same (i.e. Claims 13-19), novel over the prior art. This limitation, i.e., inclusion of two vs. no magnetically conductive rings, also makes amended Claim 12 non-obvious over the prior art (see below at 3.2.1.2 for description of new and unexpected results).

3.2. Comment 6 states that, "as to claims 9, 20 and 31, Street discloses an exercise device as described above . . . Street further discloses a flywheel assembly (40) mounted on the shaft, a unidirectional bearing (86) disposed between the shaft and each pulley and an adjustable resistance device (50) disposed adjacent to the flywheel to provide resistance to

the flywheel (see Col. 2, line 64-Col. 3, lines 20-33 and Fig. 2). *Street does not disclose that the adjustable resistance device is magnetic.* Wang et al. disclose a similar exercise device having pulleys that rotate a flywheel that includes an adjustable magnetic resistance device (28). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to substitute Street's weight-strap resistance means with Wang's magnetic resistance means since the latter is considered to be functionally equivalent in the exercise art in providing an adjustable resistance and the latter device is more compact for ease of storage and transport of the overall device." [emphasis added]

3.2.1. Remarks. Independent Claims 1, 12 and 23 (base claims from which 9, 20 and 31

depend) have been amended to include the limitation of "*a flywheel assembly including a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel.*" This amendment makes the base claims, and thereby all claims depending from same, both novel and non-obvious for the reasons described below.

3.2.1.1. The inclusion of two magnetically conductive rings is novel. The cited Wang reference discloses a "magnetic control resistance mechanism 20.. include[ing] a flywheel 21..." and the flywheel includes "a magnet set 28 which is kept away from the flywheel 21..." (see Wang Fig. 3, col. 2, L 2-3, 25-28, 45-46). No magnetically conductive rings are associated with the flywheel 21 of Wang. However, the present invention discloses, by contrast, a flywheel 75 which includes two magnetically conductive rings 73 disposed respectively and on opposite sides of the flywheel 75 (see Figs. 3-4, p. 8, L9), making the present invention novel with respect to this feature over Wang (and also Street). Independent Claims 1, 12, and 23 are amended to include the limitation of a flywheel assembly including a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel (a limitation originally included in Claims 10, 21, and 32 – all "allowable" according to the Office Action), making those amended claims, and all claims depending from same, novel over the prior art.

3.2.1.2. The inclusion of two magnetically conductive rings is non-obvious. The inclusion of a flywheel disposed between two magnetically conductive rings 73 is furthermore non-obvious over Wang because of the unexpected advantages the inclusion of this feature provides. Several of these advantages include that:

3.2.1.2.1.1. Because there are two magnetically conductive rings 73 disposed on opposite sides of the flywheel 75 in the present invention, there are two separate magnetic drag resistances on each side of the flywheel. These separate magnetic drag resistances can have a better performance than a single "magnet set" as disclosed in Wang.

3.2.1.2.1.2. Because the flywheel 75 of the present invention is disposed between two separate magnetically conductive rings 73, it may conduct heat produced by an Eddy Current Brake (ECB) effect so as to decrease the temperature of the magnetically conductive rings 73 and increase the performance of the ECB effect. The magnetically conductive rings 73 may produce magnetic drag resistance due to the ECB effect.

3.2.1.2.1.3. Because the flywheel 75 is disposed between the two magnetic conductive rings 73, the flywheel 75 may also provide sufficient rotational momentum because of thickness and weight.

3.2.1.3. Conclusion. For the above-described reasons, Claims 9, 20 and 31 (which depend from amended base claims 1, 12 and 23, respectively) are in condition for allowance as depending from base claims which are novel and non-obvious over the prior art.

4. **Office Action's Comment** 7 objects to Claims 10, 11, 21, 22, 32 and 33 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4.1.1. Remarks. Base Claims 1, 12 and 23 have been amended to include a limitation of originally filed dependent Claims 9, 20 and 31, respectively, i.e., a flywheel assembly mounted on said rotary shaft. These base Claims are further amended to include a limitation of originally filed dependent Claims 10, 21, and 32, respectively, i.e., the

flywheel being further limited to include a "flywheel and a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel.". The inclusion of these limitations makes Base Claims 1, 12 and 23 novel and non-obvious over the prior art for reasons discussed above. Claims 9, 20, and 31 are cancelled. Claims 10, 21, and 32 which originally depended from cancelled 9, 20 and 31, now depend from allowable base claims 1, 12 and 23, respectively, and are therefore allowable. Likewise, Claim 22 and 33 which depend from allowable claims 21 and 32, are therefore themselves also allowable.

Conclusion

For the foregoing reasons, Applicant submits that the specification, drawings and all remaining pending claims are in proper form and clearly and patentably distinguish the present invention over the prior art. Therefore Applicant submits that this application is now in condition for allowance, which action Applicant respectfully solicits. No new matter has been added.

Date: 3/9/2005



Patricia Smith King
Registration No. 41899
King Research & Law
222 N. Midvale Blvd., Suite 22
Madison, WI 52705-5076
1-608-231-2988
Customer No. 22224